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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/855,404	05/15/2001	Axel Scherer	Q050	9140

7590

04/18/2003

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EXAMINER

FORTUNA, ANA M

ART UNIT

PAPER NUMBER

1723

DATE MAILED: 04/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/855,404

Applicant(s)
Scherer

Examiner
Ana Fortuna

Art Unit
1723



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Feb 5, 2003
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above, claim(s) 1-10 and 20-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-14 is/are rejected.
- 7) ☒ Claim(s) 15-19 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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DETAILED ACTION

Claim Rejections - 35 U.S.C. § 112

1. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1~~9~~ is unclear, in line 2, d is referred as the thickness of the middle layer, and in line 8, d seems to identify the size of the channel in the middle layer. Claim 1~~9~~ is also unclear as to whether the channel in the middle layer have a diameter equivalent to the thickness of the middle layer, or is the same size as the middle layer.

2. *Claim Rejections - 35 U.S.C. § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 11, 12, 13, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenblum (3,812,972)(hereinafter '972). Reference '972 discloses a filter medium having a multilayered structure including at least two filter members continuously contacting opposed surfaces, and having a defined liquid flow path though the filter members (abstract, Figs. 1 and 5, column 2, lines 50-68, column 3, lines 18-41, column 4, lines 3-14). Reference '972 fails to illustrate the third layer in the superimposed layered filter, fig. 7 clearly illustrated the two layers

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arrangement, however, the filter is not limited, since the term "at least two" suggests more than two filtration members superimposed. It would have been obvious to one skilled in the art at the time the invention was made to arrange a third layer, having the holes or inlet openings out of register with the second (middle layer), and with a third filter member or layer respectively, based on the suggestion of assembling more than one layer. It would have been also obvious to one skilled in the art at the time the invention was made further provide a channel in the middle layer, as suggested (Fig. 5, element 16), and further provide an additional member with discharge openings or channels, for discharging filtrate in operation, as also suggested by '972 to provide a liquid flow path at the interface of the filter members (column 4, lines 3-14). The hole, channel and second channel are defined by the structure of Fig. 5, elements 12, 16, 22, 14, 16). Regarding claim 12, '972 teaches forming the grooves or channels or openings by chemical etching (column 3, first paragraph). As to claim 13, '972 selecting the design of the hole and groove construction to provide effective filtration of any preselected liquid, considering factors such as flow rate of the filter, liquid viscosity (column 3, last paragraph and column 4, lines 1-2), therefore, selecting a channel size or layer with a thickness within the claimed size it would have been obvious to one skilled in the art at the time the invention was made. The offset holes are illustrated in Fig. 5).

5. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uram (4,721,567) (hereinafter '567). '567 discloses a filter having a top layer, and intermediate layer and a bottom layer provided with openings and channels, the filter defining a tortuous path and having offset holes defining the path (Fig. 1, elements 14 and 11 as plates or filtration layers, and 13 as

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openings or channels which pass through the middle layer and further through the lower layer and final lower layer opening or exit. The filter removes particles from a liquid, and can be designed to have the desired restricted passage between apertures (column 3, lines 43-57). '567 fails to disclose the filter retaining particles smaller than the size of the thickness of the second layer, however, teaches the widths being from about 3 mm to 1.5, and the thickness of the filtration elements as being of at least 1 mm (column 4, lines 66-68).. It would have been obvious to one skilled in the art at the time the invention was made, depending on the size of the particles to be retained by the hole and or channel in the filter structure, to select a channel size equivalent to the thickness of the layer, e.g. a size of 2 mm in a layer greater than one mm, for example 2 mm, as suggested by '567. As to claim 12, making the channels by etching is not disclosed in the reference, however the channels having the structure claimed is disclosed as discussed above, independently of the method of making the channels. As to claim 13, selecting the thickness of the layer depending on the desired final size of the filtration structure. It would have been further obvious to one skilled in the art to scale down the size of the filter of reference '567, for adapting the filter to a particular separation or particles removal from a liquid. Regarding claims 14, the offset holes and/or channels are illustrated in Fig.1.

Allowable Subject Matter

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6. Claims 15-19 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

7. Reasons for allowance: the combination of structure including conducting layers as claimed in claim 15 and dependent claims 16-19 is not suggested or disclosed in the prior art of record.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Reference 2,028,168 discloses a layered filter arrangement including a middle layer and openings in offset arrangement. .

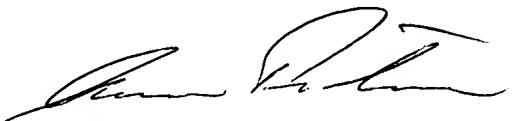
79. The election of the claims considered above in paper NO.6 is acknowledge.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana Fortuna whose telephone number is (703) 308-3857. The examiner can normally be reached on Monday-Friday from 9:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker, can be reached on (703) 308-0457. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310 for regular responses, and (703)872-9311 for after finals.

Ana Fortuna

April 15, 2003


ANA FORTUNA
PRIMARY EXAMINER